

WHAT IS CLAIMED IS:

1. An image pickup device comprising:  
pixels each including a photoelectric conversion  
unit and a transfer switch for transferring a  
photoelectric conversion signal generated by the  
photoelectric conversion unit; and  
driving means for applying a pulse to the transfer  
switch a plurality of times when the signal generated  
by the photoelectric conversion unit is transferred via  
the transfer switch.
2. An image pickup device according to claim 1,  
wherein said pixel includes amplifying means for  
amplifying and outputting the photoelectric conversion  
signal transferred via the transfer switch.
3. An image pickup device according to claim 2,  
wherein said driving means has an operation mode for  
resetting an input portion of said amplifying means and  
outputting a reset signal generated upon resetting from  
said amplifying means and an operation mode for  
outputting the photoelectric conversion signal from  
said amplifying means, and wherein said image pickup  
device further comprises subtracting means for  
subtracting the reset signal from the photoelectric  
conversion signal.

4. An image pickup device according to claim 3, wherein the photoelectric conversion signal and the reset signal include correlated signals.

5           5. An image pickup device according to claim 1, further comprising a circuit for controlling a read operation of a signal from said pixel or processing the signal from said pixel, wherein the transfer switch includes a MOS transistor, and wherein said pixel and  
10           said circuit are formed by CMOS processes.

            6. An image pickup device according to claim 2, further comprising a circuit for controlling a read operation of a signal from said pixel or processing the  
15           signal from said pixel, wherein the transfer switch and said amplifying means include MOS transistors, and where said pixel and said circuit are formed by CMOS processes.

20           7. An image pickup device according to claim 1, further comprising a circuit for processing a signal from said pixel and a lens for focussing light onto said photoelectric conversion unit.

25           8. A driving method for an image pickup device having pixels each including a photoelectric conversion unit and a transfer switch for transferring a

photoelectric conversion signal generated by  
said photoelectric conversion unit, comprising:

5 a driving step applying a pulse to the transfer  
switch a plurality of times when the signal generated  
by said photoelectric conversion unit is transferred  
via said transfer switch.

10 9. A driving method according to claim 8, wherein  
the pixel includes amplifying means for amplifying and  
outputting the photoelectric conversion signal  
transferred via said transfer switch.

10. A driving method according to claim 9,  
further comprising:

15 a step of resetting an input portion of said  
amplifying means and outputting a reset signal  
generated upon resetting from the amplifying means;

a step of outputting the photoelectric conversion  
signal from said amplifying means; and

20 a step of subtracting the reset signal from the  
photoelectric conversion signal.

11. A driving method according to claim 10,  
wherein the photoelectric conversion signal and the  
25 reset signal include correlated signals.

12. A driving method according to claim 8,

wherein said image pickup device comprises a circuit  
for controlling a read operation of a signal from the  
pixel or processing the signal from the pixel, wherein  
said transfer switch includes a MOS transistor and the  
5 pixel and the circuit are formed by CMOS processes.

13. A driving method according to claim 9,  
wherein said image pickup device comprises a circuit  
for controlling a read operation of a signal from the  
10 pixel or processing the signal from the pixel, wherein  
the transfer switch and the amplifying means include  
MOS transistors and the pixel and the circuit are  
formed by CMOS processes.